

FIG. 1A

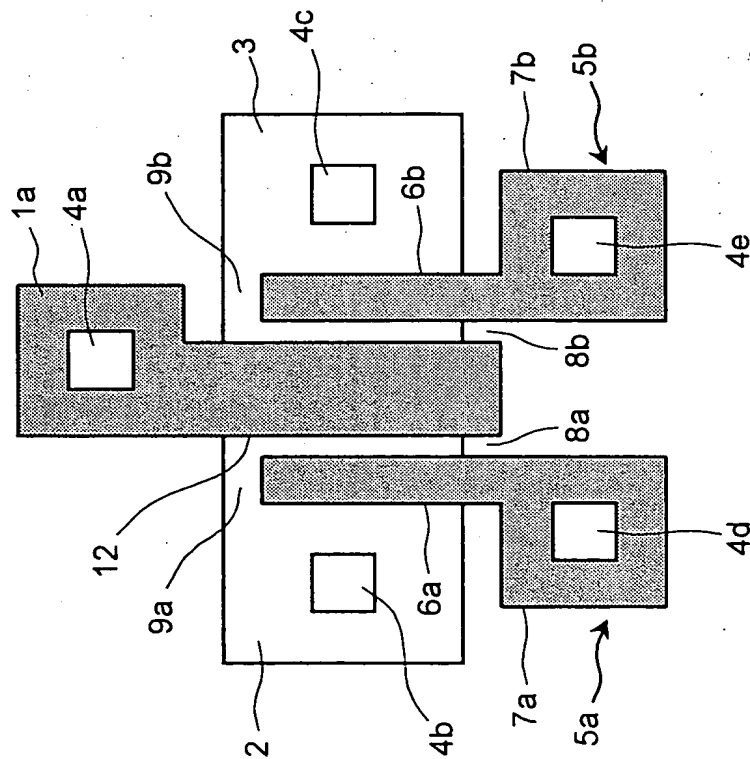


FIG. 1B

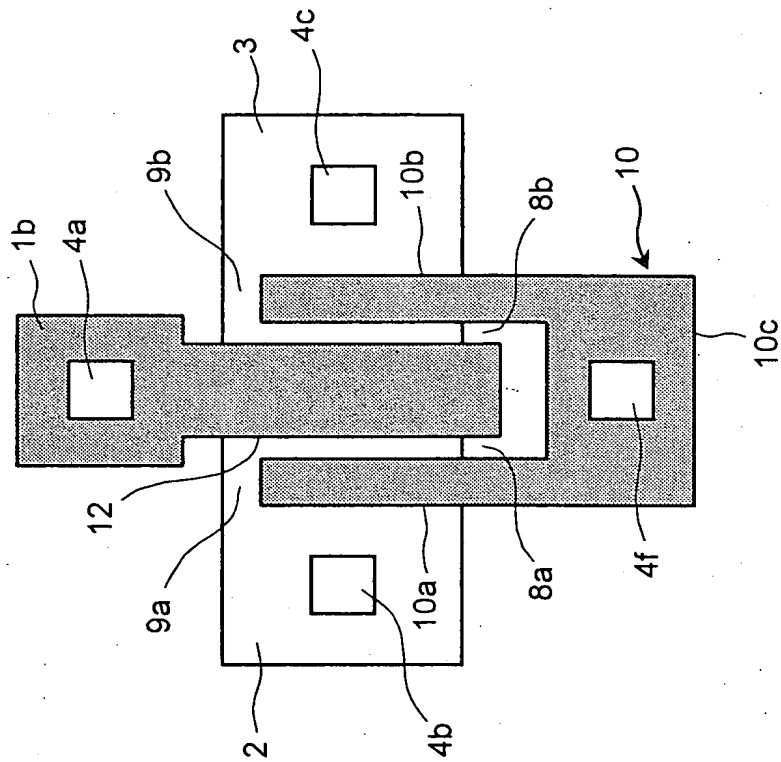
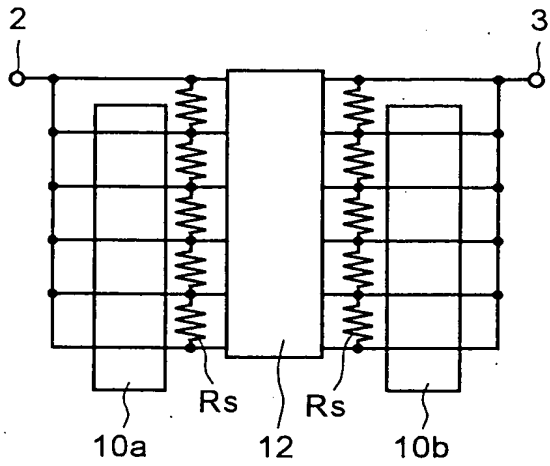


Diagram illustrating a plan view of a semiconductor device 10. The device features a central channel region 12, which is a narrow rectangular area. Four square regions, labeled 4a, 4b, 4c, and 4f, are positioned around the channel. Regions 4a and 4c are located on the top and bottom of the channel, respectively, while regions 4b and 4f are located on the left and right sides, respectively. The device is defined by a gate structure 2 and 3, which are rectangular regions surrounding the channel. A source/drain region 10a and 10b is located on the left and right sides of the channel, respectively. Dimensions are indicated: W is the width of the channel, L is the length of the channel, and S is the width of the source/drain region. Arrows indicate current flow Sc and Sv.

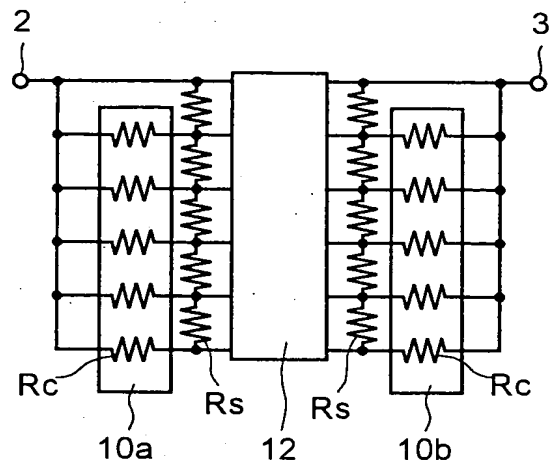
The diagram shows a differential amplifier circuit. It consists of two input stages, 10a and 10b, which are connected to a central block 12. Each input stage contains a network of resistors and dependent current sources. The output of each stage is connected to a common output node through a resistor labeled R_s . The input stages are also connected to a common input node through a resistor labeled R_c . The central block 12 is connected to the output nodes. The circuit is powered by a supply voltage V_{cc} and ground.

FIG.4A



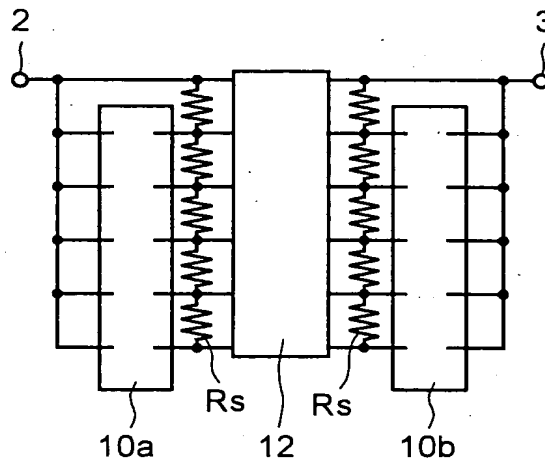
$G_c(\text{gate}) \ll G_c(\text{control gate})$

FIG.4B



$G_c(\text{gate}) = G_c(\text{control gate})$

FIG.4C



$G_c(\text{gate}) \gg G_c(\text{control gate})$

FIG. 5A

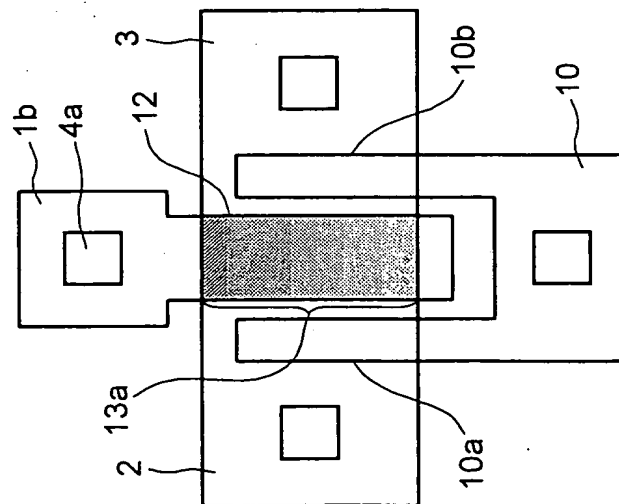

$$Gc(\text{gate}) < Gc(\text{control gate})$$

FIG. 5B

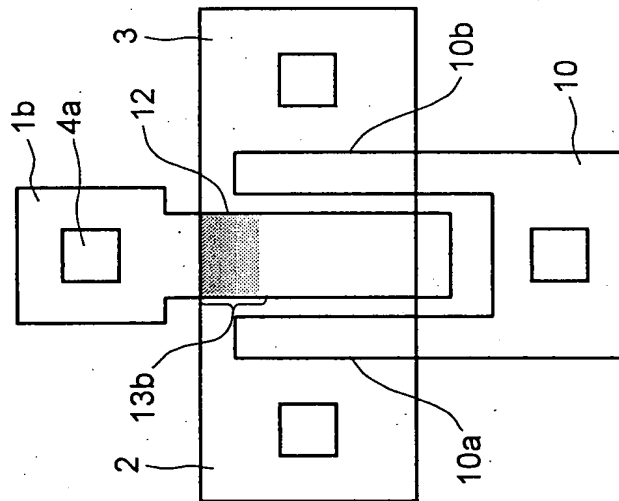
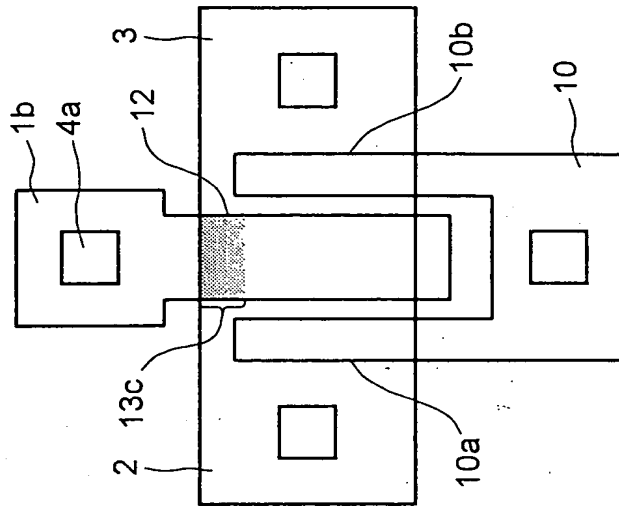

$$Gc(\text{gate}) = Gc(\text{control gate})$$

FIG. 5C

 $G_c(\text{gate}) > G_c(\text{control gate})$

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FIG. 7

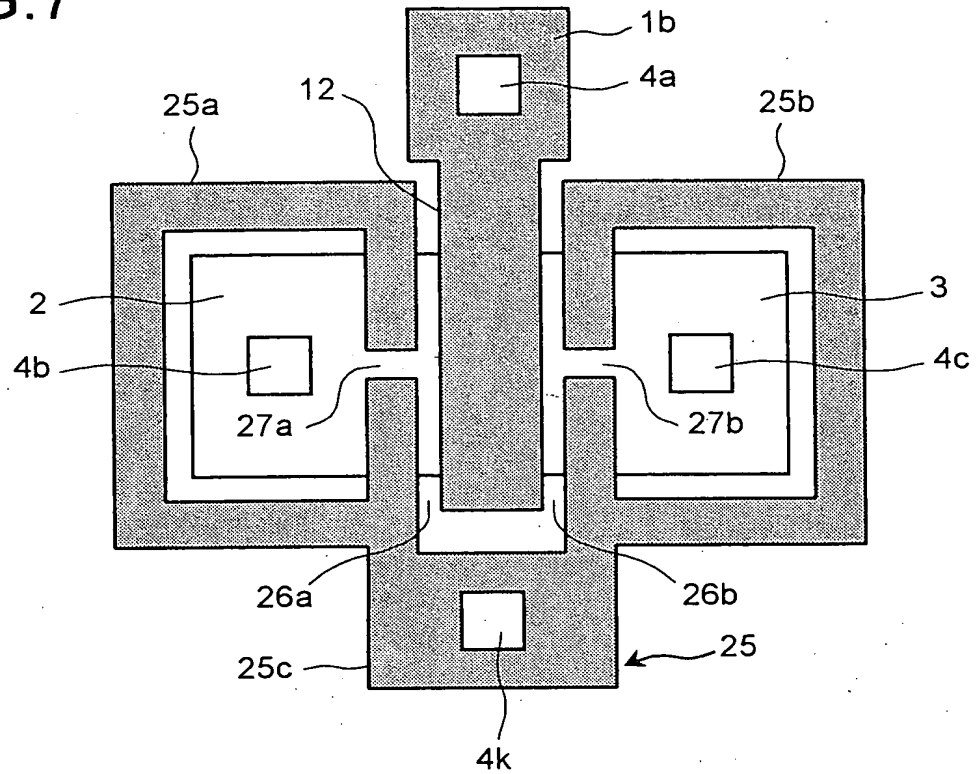
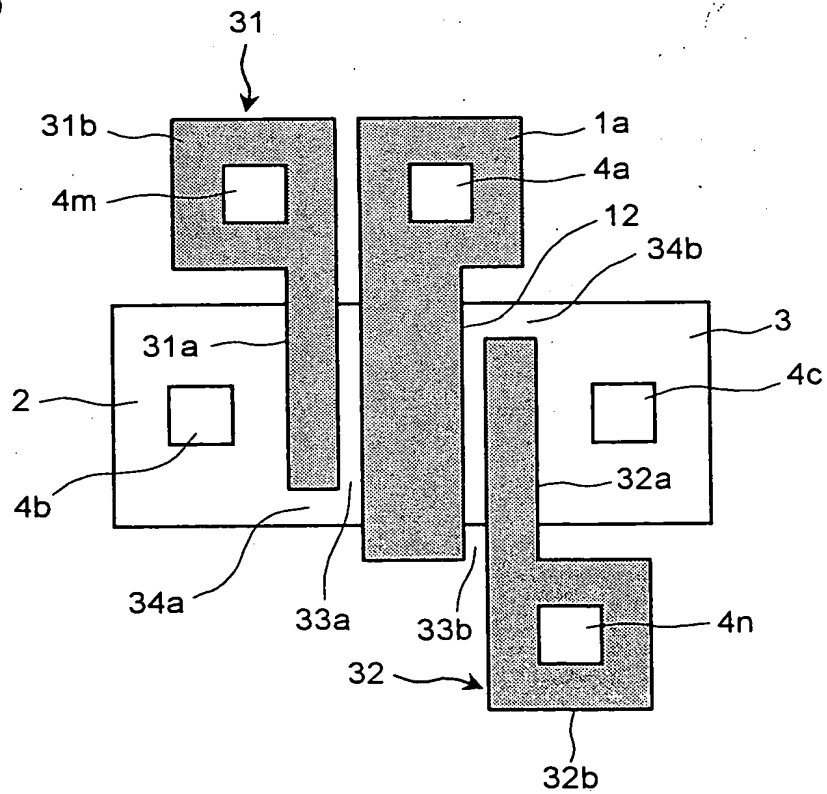


FIG. 8



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FIG. 9

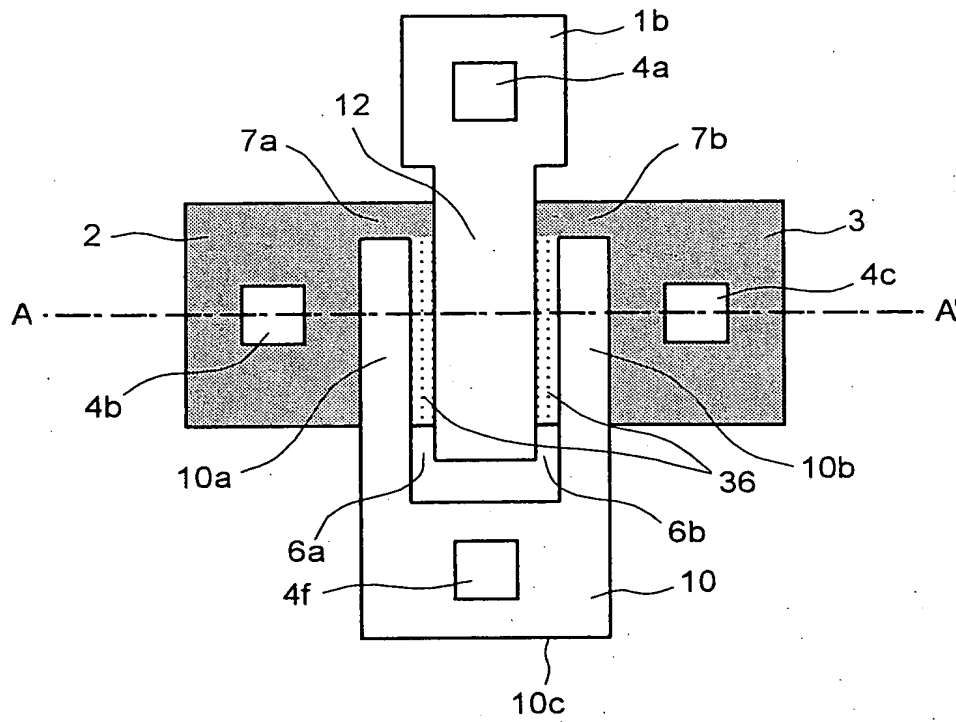
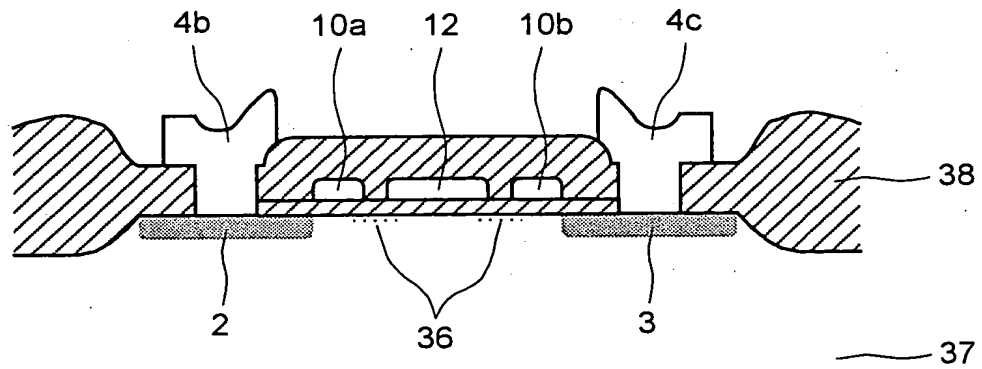


FIG. 10



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FIG.11

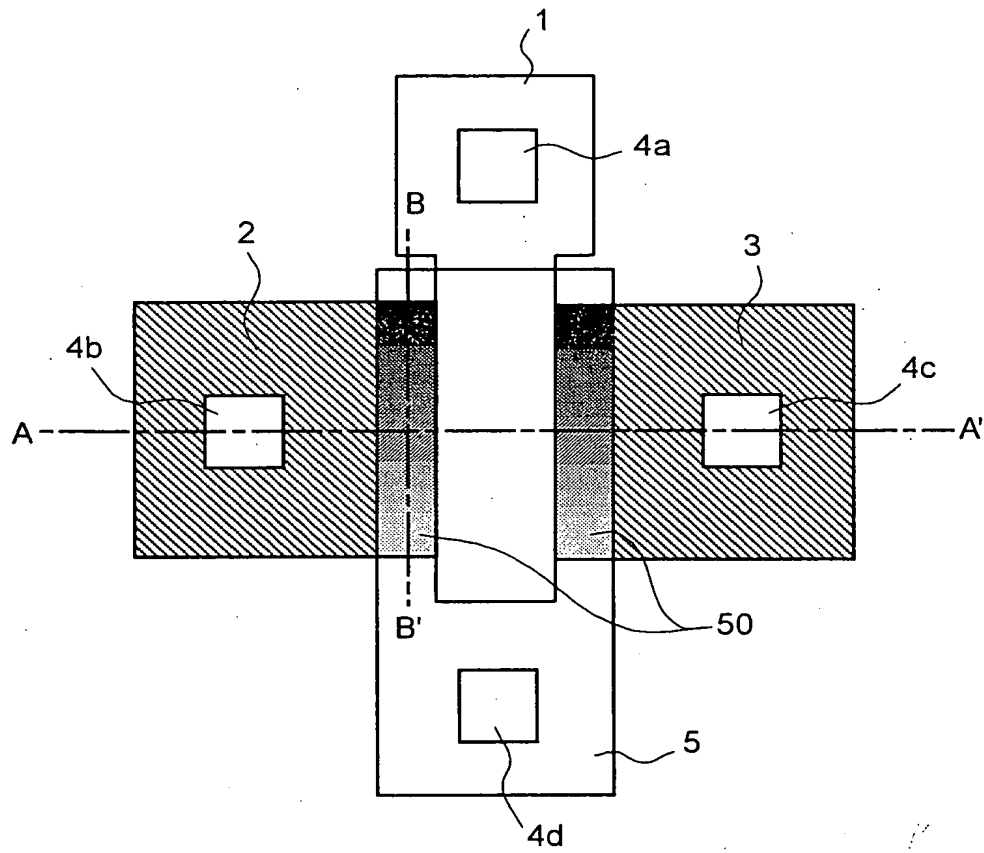
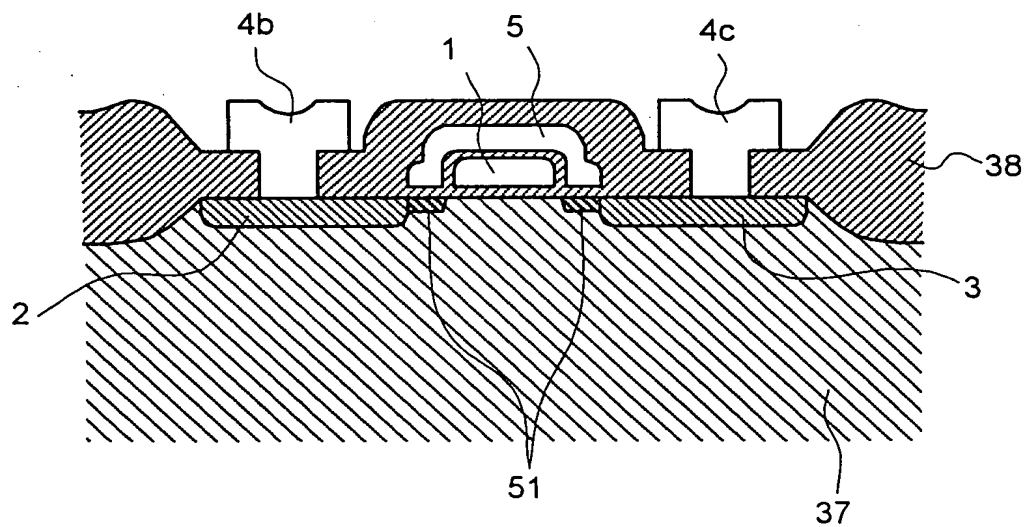
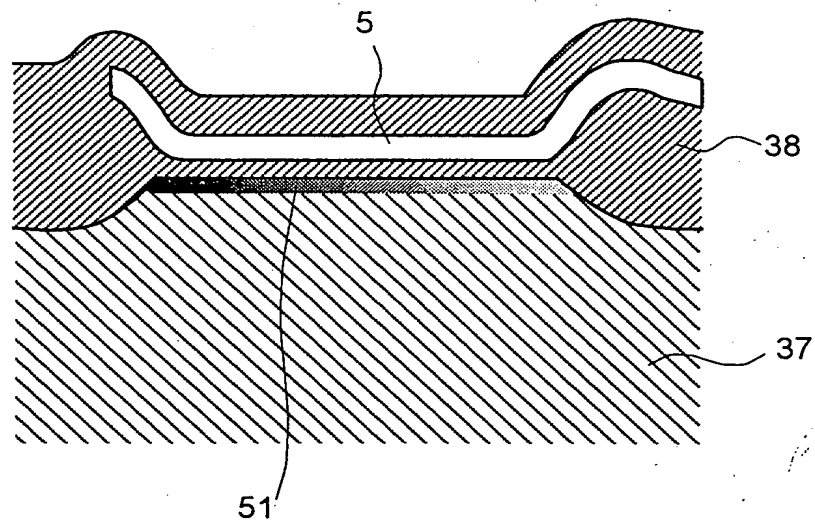


FIG.12



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FIG. 13



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FIG. 14

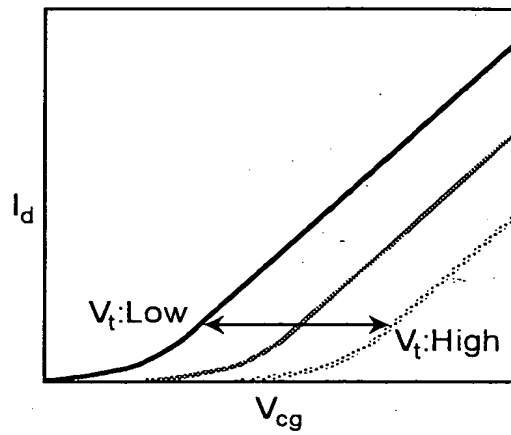


FIG. 15

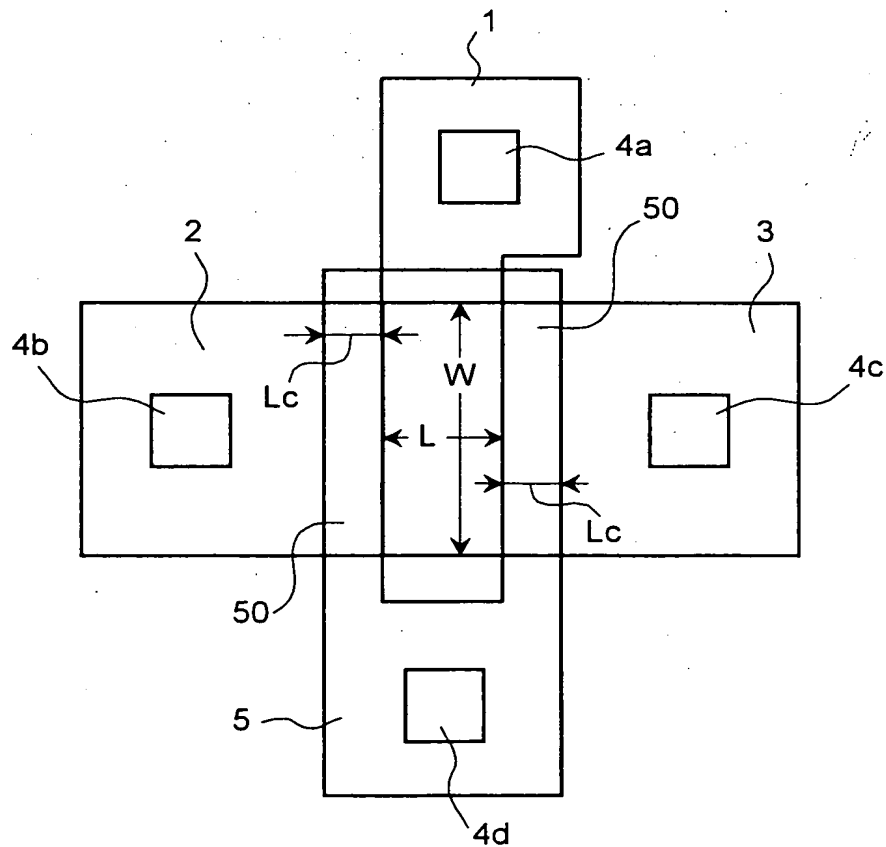


FIG. 16A

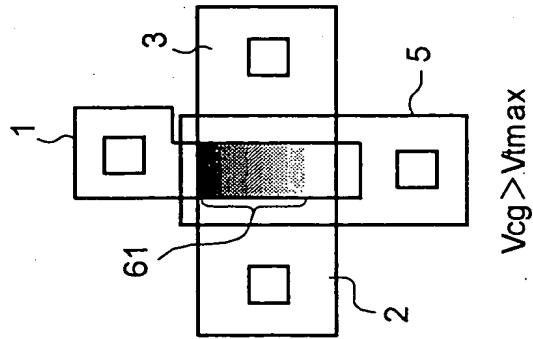


FIG. 16B

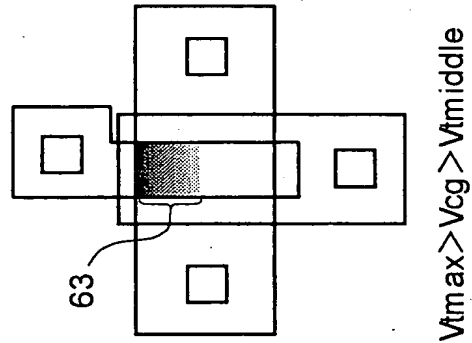
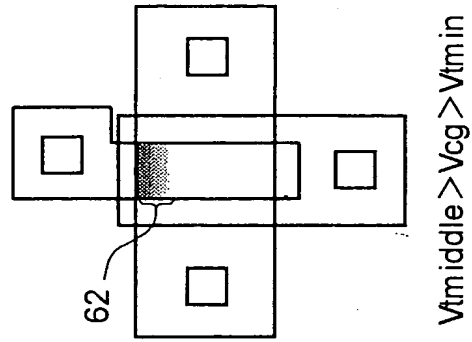


FIG. 16C



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FIG. 17

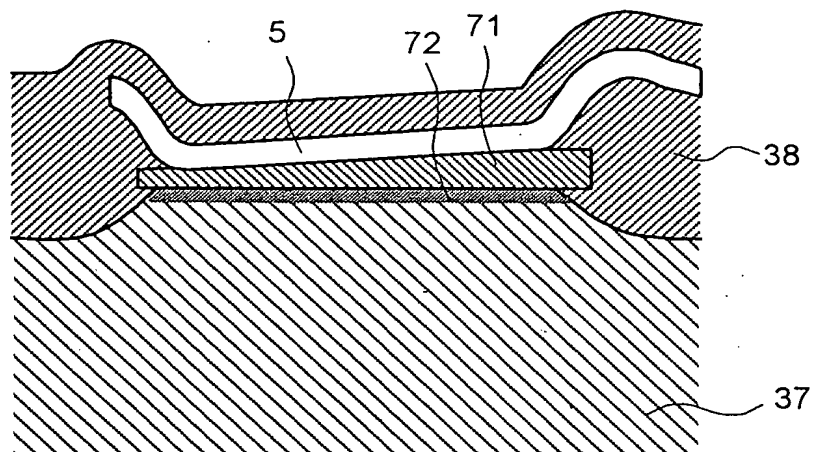
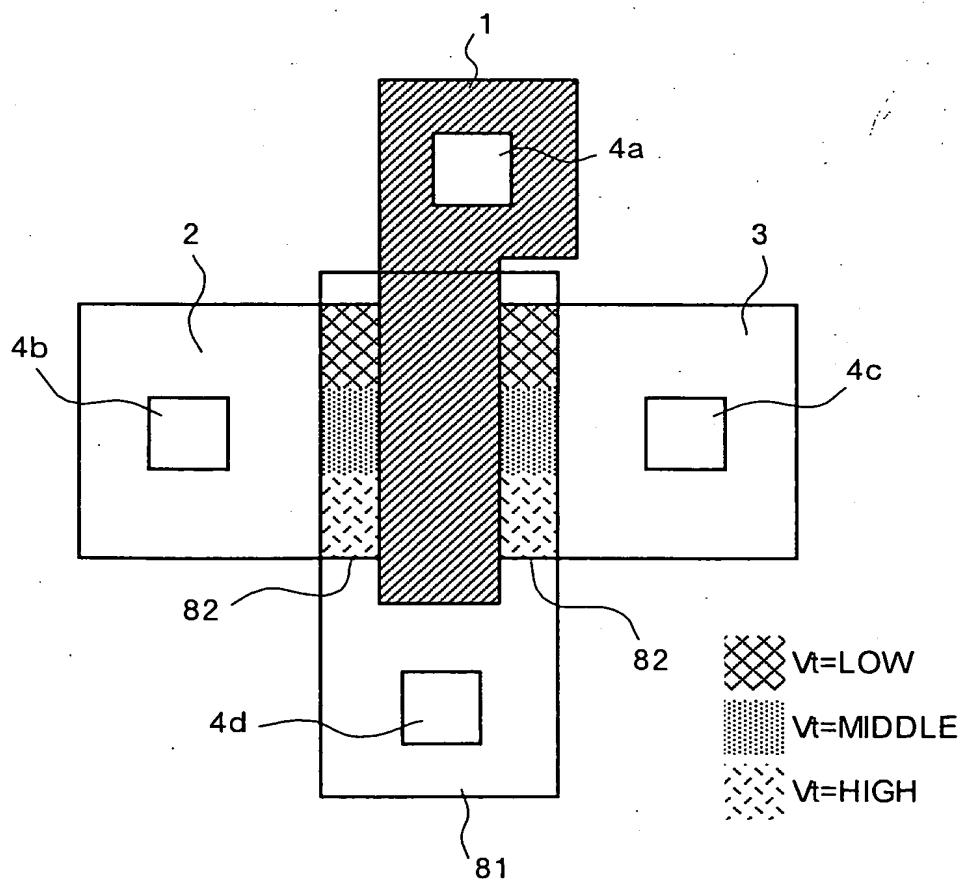


FIG. 18



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FIG. 19

